

What is Claimed is:

1. An oven comprising:
  - an oven cavity defined by a plurality of side walls, a bottom wall, a top wall, a back wall, and a door;
  - a fan compartment disposed substantially centrally on said back wall, and defined by a baffle plate spaced forwardly from the oven back wall, a plurality of flanges, and a portion of said back wall, said baffle plate having a central fan inlet;
  - a combustion box having a front wall, a rear wall, a plurality of side walls and a bottom, said box being mounted to an underside of said oven bottom;
  - a tube-type gas burner having a longitudinal axis perpendicular to said oven side walls, said burner being disposed in a forward portion of said combustion box;
  - a flue spout having a solid front wall spaced forwardly from said baffle plate, a plurality of flanges, and a lower portion open to said combustion box, said flue spout being adapted to join said fan compartment and said combustion box in fluid communication; and
  - a centrifugal fan disposed within said fan compartment.
2. The oven of Claim 1, wherein said baffle plate comprises peripheral outlets.
3. The oven of Claim 2, wherein said combustion box bottom comprises a rearward upward slope.
4. The oven of Claim 3, wherein said front side of said combustion box comprises a plurality of primary air inlet holes.
5. The oven of Claim 4, wherein said bottom of said combustion box comprises a plurality of secondary air inlet holes.
6. The oven of Claim 4, further comprising exhaust vents located substantially near the bottom of said back wall.
7. The oven of Claim 2, further comprising openings formed in said oven bottom, said openings being adapted to join said combustion box and said oven cavity in direct fluid communication.
8. The oven of Claim 6, wherein said flue spout comprises an upper portion which covers substantially the entire fan inlet.

9. The oven of Claim 6, wherein said flue spout comprises an upper portion which covers substantially half of the fan inlet.
10. The oven of Claim 7, wherein said fan compartment comprises an opening in at least one of said rearward-extending flanges:
11. An oven comprising:
- an oven cavity defined by a plurality of walls, a bottom, a top wall, a back wall, and a door;
  - a combustion box having a front wall, a plurality of side walls and a bottom, said box being mounted substantially centered to an underside of said oven bottom;
  - said oven bottom having openings joining said oven cavity and said combustion box in fluid communication;
  - a baffle plate having a central fan inlet and peripheral fan outlets;
  - a fan compartment disposed substantially at the center of said back wall, and defined by said baffle plate, a plurality of flanges extending between said baffle plate and said back wall, and a portion of said back wall;
  - a centrifugal fan disposed within said fan compartment;
  - a gas burner disposed substantially near and parallel to said front wall of said combustion box; and
  - a flue spout having a solid front wall disposed between said baffle plate and said oven cavity and a plurality of flanges extending between said flue spout front wall and said baffle plate, said flue spout being adapted to join said fan compartment and said combustion box in fluid communication; and said fan inlet being substantially entirely covered by said flue spout.
12. The oven of Claim 11, wherein said combustion box bottom comprises a rearward upward slope.
13. The oven of Claim 12, wherein said combustion box bottom comprises a plurality of secondary air inlet holes.
14. The oven of Claim 13, wherein said front side of said combustion box comprises a plurality of air inlet holes.
15. The oven of Claim 14, wherein said bottom of said combustion box comprises a plurality of air inlet holes.

16. The oven of Claim 14, further comprising exhaust vents located substantially near the bottom of said back wall.

17. The oven of Claim 11, wherein said fan compartment comprises an opening in one of said rearward-extending flanges.

18. An oven comprising:

an oven cavity defined by a plurality of walls, a bottom, a top wall, a back wall, and a door;

a combustion box having a plurality of upright walls and a bottom wall, said box being mounted to an underside of said oven bottom;

wherein said oven bottom has openings joining said oven cavity and said combustion box in fluid communication;

a baffle plate having a central fan inlet and peripheral fan outlets;

a fan compartment disposed substantially centrally on said back wall, and defined by said baffle plate, a plurality of rearward-extending flanges, and a portion of said back wall;

a centrifugal fan disposed within said fan compartment;

a tube-type gas heat source disposed substantially near and parallel to said front wall of said combustion box; and

a flue spout having a front wall, a top wall, and a plurality of rearward-extending sides, and a lower inlet portion, said inlet portion being substantially wider than said top wall, said flue spout being disposed between said baffle plate and said oven cavity such that said inlet portion extends into said combustion box, and said flue spout covers a portion of said fan inlet such that said flue spout is placed in fluid communication with said fan compartment.

19. The oven of Claim 18 wherein said fan inlet is substantially entirely covered by said flue spout.

20. The oven of Claim 19, wherein said flue spout is adapted to allow only heated air from said combustion box to enter said fan inlet.

21. The oven of Claim 20, further comprising exhaust vents located substantially near the bottom of said back wall.

22. A method of convectively cooking a food product comprising the steps of:

(a) providing an oven having a cooking space, a combustion box disposed below said cooking space, a fan compartment disposed at the rear of said cooking space, and providing a flue spout disposed to join said combustion box, said fan compartment, and said cooking space in fluid communication;

(b) providing a fan in said fan compartment;

(c) providing a gas burner in a front portion of said combustion box;

(d) igniting said burner and heating air in said combustion box; and

(e) drawing heated air from said combustion box through said flue spout, and blowing the heated air horizontally into said cooking space with said fan.

23. The method of Claim 22, further comprising: providing fluid communication between said cooking space and said combustion box through openings in a bottom wall of said cooking space, and allowing hot air from said combustion box to flow through said openings and into said oven cavity.

24. The method of Claim 22 further comprising providing fluid communication between said cooking space and said fan compartment with intake holes, and using said fan to draw air from said cooking space into said fan compartment and mixing said cooking space air with said combustion box air.

25. The method of Claim 23 further comprising providing fluid communication between said cooking space and said fan compartment with intake holes in a wall of said fan compartment, and using said fan to draw air from said cooking space into said fan compartment and mixing said cooking space air with said combustion box air, and blowing said mixed air horizontally into said cooking space.